

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A photovoltaic device, comprising a composition of carbon nanotubes and of at least one organic compound acting as a hole conductor.

Claim 2 (Currently Amended): The device according to claim 1, ~~characterized in that wherein~~ it further comprises:

- a first electrode on one side of said composition of carbon nanotubes and of at least one hole conductor, said first electrode having a first work function, and
 - a second electrode on another side of said composition of carbon nanotubes and of at least one hole conductor, said second electrode having a higher work function than said first work function.

Claim 3 (Currently Amended): The device according to ~~any of the foregoing claims,~~ characterized in that claim 1, wherein said at least one hole conductor is a conjugated polymer or a blend of at least two conjugated polymers.

Claim 4 (Currently Amended): The device according to ~~any of the foregoing claims,~~ characterized in that claim 1, wherein said carbon nanotubes are a mixture of metallic and semiconducting carbon nanotubes, ~~preferably only semiconducting carbon nanotubes.~~

Claim 5 (Currently Amended): The device according to ~~any of the foregoing claims,~~ characterized in that claim 1, wherein said carbon nanotubes are a mixture of multi-walled and single-walled carbon nanotubes, ~~preferably only single-walled carbon nanotubes.~~

Claim 6 (Currently Amended): The device according to ~~any of the foregoing claims,~~
~~characterized in that claim 1, wherein~~ the carbon nanotubes have a diameter in the range of from 0.5 nm to 2 nm.

Claim 7 (Currently Amended): The device according to ~~any of the foregoing claims,~~
~~characterized in that claim 1, wherein~~ the band gap of said carbon nanotubes lies in the range of from about 0.5 to about 1 eV.

Claim 8 (Currently Amended): The device according to ~~any of the foregoing claims,~~
~~characterized in that claim 1, wherein~~ the band gap of said at least one hole conductor lies in the range of from about 1 eV to 3 eV, ~~preferably from about 1.5 eV to 2.5 eV, more preferably from about 1.75 eV to 2.25 eV.~~

Claim 9 (Currently Amended): The device according to ~~any of the foregoing claims,~~
~~characterized in that claim 1, wherein~~ said hole conductor is selected from the group comprising semiconducting organic materials with a band gap above 1 eV and a Π -orbital higher in energy than the highest occupied molecular orbital (HOMO) of said carbon nanotubes.

Claim 10 (Currently Amended): The device according to ~~any of the foregoing claims,~~
~~characterized in that claim 1, wherein~~ said composition of carbon nanotubes and of at least one organic hole conductor comprises a mixture of carbon nanotubes and at least one hole conductor.

Claim 11 (Currently Amended): The device according to ~~any of claims 1-9,~~
~~characterized in that claim 1, wherein~~ said composition is a two-layer-system, wherein said at least one hole conductor is in one layer and said carbon nanotubes are in another layer.

Claim 12 (Currently Amended): The device according to ~~any of claims 1-9,~~
~~characterized in that claim 1, wherein~~ said composition is a multiple-layer-system, wherein said at least one hole conductor and said carbon nanotubes are in alternating layers.

Claim 13 (Currently Amended): The device according to ~~any of claims 2-12,~~
~~characterized in that claim 2, wherein~~ said carbon nanotubes have been vertically grown; preferably on one of said electrodes.

Claim 14 (Currently Amended): The device according to ~~any of claims 2-13,~~
~~characterized in that claim 2, wherein~~ a hole conductor is directly grown on said carbon nanotubes ("overgrown nanotubes").

Claim 15 (Currently Amended): The device according to ~~any of claims 2-12 and 14,~~
~~characterized in that claim 2, wherein~~ said carbon nanotubes have been horizontally aligned; preferably on one of said electrodes.

Claim 16 (Currently Amended): The device according to ~~any of the foregoing~~
~~claims, characterized in that claim 1, wherein~~ said at least one hole conductor is selected from the group ~~comprising~~ ~~consisting of~~:

~~polymethacrylates and derivatives, e.g. bis (diaryl amino) biphenyl functionalised methacrylates and copolymers thereof,~~

polyaniline and derivatives,

polyphenylene and derivatives,

polyphenylene vinylene and derivatives, e. g. poly(2-methoxy, 5-(3', 7'-dimethoxyethoxy) 1,4-phenylene vinylene (MDMO-PPV),

polythiophene and derivatives,

copolymers of triphenyl diamine derivatives and trimethoxyvinylsilane,

poly(3,4-ethylenedioxythiophene: polystyrene sulfonic acid) (PEDOT: PSS),

polyacetylene and derivatives thereof,

polyparaphenylene and derivatives thereof,

polypyrrole and derivatives thereof,

polyparaphenylene sulfide and derivatives thereof,

polycarbazole and derivatives thereof,

polyisothianaphene and derivatives thereof,

poly(1,6-heptadiyne) and derivatives thereof, and

polyquinoline and derivatives thereof.

Claim 17 (Currently Amended): The device according to ~~any of claims 1-16, characterized in that claim 1, wherein~~ it is an organic solar cell.

Claim 18 (Currently Amended): The device according to ~~any of claims 2-17, characterized in that claim 2, wherein~~ said first and/or said second electrode is a film or layer of a transparent material.

Claim 19 (Currently Amended): The device according to ~~any of claims 2-18, characterized in that claim 2, wherein~~ said first or second electrode is a metallic electrode.

Claim 20 (Currently Amended): The device according to ~~any of claims 2-19~~, characterized in that claim 2, wherein said first and/or said second electrode is coated with an evaporated layer of fluoride or acetate, e.g. ~~LiF, CsF, CH₃COOLi~~, or a combination of fluoride and acetate.

Claim 21 (Currently Amended): The device according to ~~any of claims 18-20~~, characterized in that claim 2, wherein it additionally comprises a solid inorganic crystalline or glassy substrate, or a metal foil substrate, preferably a stainless steel foil substrate, or a polymer substrate pre-coated with said first or said second electrode.

Claim 22 (Currently Amended): The device according to ~~any of claims 18-20~~, characterized in that claim 18, wherein it additionally comprises a flexible polymer substrate pre-coated with said first or said second electrode.

Claim 23 (Currently Amended): A combination of the device according to ~~any of the foregoing claims~~ claim 1 with a circuit, wherein the device ~~according to any of the foregoing claims~~ acts as an internal power supply.

Claim 24 (Currently Amended): ~~Use of the device according to any of claims 1-22 as~~ a A solar cell comprising the device according to claim 1.

Claim 25 (Currently Amended): A method of generating electricity from light, characterized in that wherein a device according to ~~any of claims 1-22~~ claim 1 or a combination according to claim 23 is irradiated by light, whereupon a photo-initiated charge-

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Preliminary Amendment

separation process and subsequently a charge-transport process occurs, and wherein further electricity is recovered from said device or from said combination.